IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF VIRGINIA DIVISION

CENTRIPETAL NETWORKS, INC.,)
Plaintiff,) No.
v.)) JURY TRIAL DEMANDED
LOOKINGGLASS CYBER SOLUTIONS, INC., GILMAN LOUIE, ALSOP LOUIE MANAGEMENT LLC, ALSOP LOUIE CAPITAL 2, L.P. and ALSOP LOUIE PARTNERS 2, LLC,)) REDACTED - PUBLIC VERSION)))
Defendants.)))

COMPLAINT FOR PATENT INFRINGEMENT, BREACH OF CONTRACT, BREACH OF FIDUCIARY DUTY, AND ABETTING BREACH OF FIDUCIARY DUTY

Plaintiff Centripetal Networks, Inc. ("Centripetal") files this Complaint against LookingGlass Cyber Solutions, Inc. ("LookingGlass"), Gilman Louie, Alsop Louie Management LLC, Alsop Louie Capital 2, L.P. and Alsop Louie Partners 2, LLC. (collectively "Defendants") and alleges as follows:

THE PARTIES

- Plaintiff Centripetal is a corporation organized under the laws of the state of Delaware with its principal place of business at 2251 Corporate Park Drive, Suite 150, Herndon, Virginia 20171.
- Defendant LookingGlass is a corporation organized under the laws of the state of Delaware with its principal place located at 10740 Parkridge Blvd. Suite 200, Reston, Virginia.

- 3. LookingGlass regularly conducts and transacts business in Virginia, throughout
- the United States, and within the Eastern District of Virginia, and as set forth below, has
- committed and continues to commit, tortious acts of patent infringement within and outside of
- Virginia and within the Eastern District of Virginia. Further, LookingGlass directly or
- indirectly uses, distributes, markets, sells, and/or offer to sells throughout the United States,
- including in this judicial district, various telecommunication products, including networking
- switches, routers, and cloud products.
- 4. Defendant Alsop Louie Management LLC ("Alsop Louie Management") is a
- Delaware limited liability company with its headquarters located at 943 Howard Street, San
- Francisco, California 94103. On information and belief, Alsop Louie Management is the
- corporate parent for Alsop Louie Capital 2, L.P. and Alsop Louie Partners 2, LLC (three
- entities collectively, hereinafter "Alsop Louie").
- 5. Defendant Alsop Louie Capital 2, L.P. ("Alsop Louie Capital") is a Delaware
- limited partnership with its principal office at 50 Pacific Avenue, San Francisco, California
- 94111.
- 6. Defendant Alsop Louie Partners 2, LLC ("Alsop Louie Partners") is a Delaware
- limited liability company with its principal office at 943 Howard Street, San Francisco,
- California 94103. Alsop Louie Partners 2, LLC. is the general partner of Alsop Louie Capital 2,
- L.P.
- 7.
- 8. Defendant Gilman Louie, Chief Executive Officer of Alsop Louie Management,
- partner of Alsop Louie Capital 2, L.P. and member of Alsop Louie Partners 2, LLC,

, is the Chief Executive Officer of LookingGlass.

JURISDICTION AND VENUE

- 9. This action for patent infringement arises under the patent laws of the United States, 35 U.S.C. § 101 et seq. This court has original jurisdiction over this controversy pursuant to 28 U.S.C. §§ 1331 and 1338. This Court has supplemental jurisdiction over this controversy for all other claims asserted herein pursuant to 28 U.S.C. § 1367.
- 10. This Court has personal jurisdiction over Defendants. Defendants have conducted and do business within the State of Virginia. LookingGlass maintains a regular and established place of business in this District through a permanent physical facility located at 10740 Parkridge Blvd. Suite 200, Reston, Virginia. LookingGlass, directly or through subsidiaries or intermediaries (including distributors, retailers, and others), ships, distributes, offers for sale, sells, and advertises (including the provision of an interactive web page) their products and/or services in the United States, the State of Virginia, and the Eastern District of Virginia. LookingGlass, directly and through subsidiaries or intermediaries (including distributors, retailers, and others), has purposefully and voluntarily placed one or more of their infringing products and/or services, as described below, into the stream of commerce with the expectation that they will be purchased and used by consumers in the Eastern District of Virginia. These infringing products and/or services have been and continue to be purchased and used by consumers in the Eastern District of Virginia. LookingGlass has committed acts of patent infringement within the State of Virginia and, more particularly, within the Eastern District of Virginia. In addition, the Court has personal jurisdiction over LookingGlass because minimum contacts have been established with the forum and the exercise of

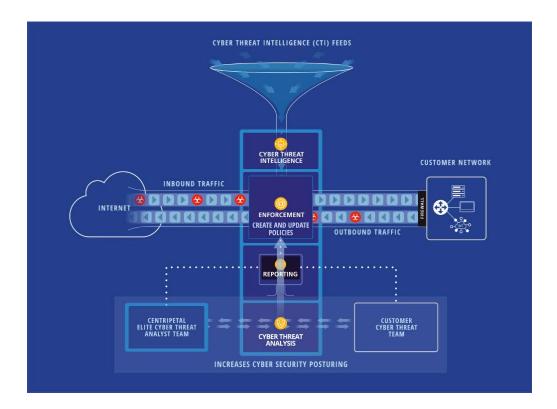
jurisdiction would not offend traditional notions of fair play and substantial justice. For example, LookingGlass advertises active job listings in this District and makes, uses, offers for sale, and sells products or services that infringe the Patents-in-Suit in this District, as further described below.

- 11. Alsop Louie and Mr. Louie have done business in the Eastern District of Virginia,
- Alsop Louie and Mr. Louie, based on their interests and respective positions in and with LookingGlass, have and continue to engage in conduct that forms the basis of the claims alleged against them herein. On information and belief, Mr. Louie has a residence in the Eastern District of Virginia. In addition, the Court has personal jurisdiction over Defendants Alsop Louie and Mr. Louie because they have established minimum contacts with the forum and the exercise of jurisdiction would not offend traditional notions of fair play and substantial justice.
- 12. Venue is proper in the Eastern District of Virginia under 28 U.S.C. §§ 1391 (b) and (c) and/or 1400(b). LookingGlass has transacted business in this District, and has infringed, induced infringement, or contributorily infringed, and continues to do so, in this District, and has a regular and established place of business in this District. LookingGlass maintains several regular and established place of business in this District described above. Centripetal is informed and believes that LookingGlass employs a number of personnel in this District, including personnel involved in LookingGlass's infringement by at least through the

testing, demonstration, support, use, offer for sale, and sale of Centripetal's patented technology within Virginia.

CENTRIPETAL'S INNOVATIONS

- 13. Centripetal was founded in 2009 and is dedicated to protecting organizations from advanced threats. Centripetal is the forerunner in developing cybersecurity technologies capable of fully operationalizing and automating threat intelligence at scale. These technologies protect organizations from advanced threats by extrapolating every and any threat intelligence feed and applying advanced packet filtering at the network edge to prevent unwanted traffic from hitting an organization's network. Centripetal has been awarded, and continues to prosecute, numerous patents covering innovations in the United States and around the world resulting directly from Centripetal's research and development efforts.
- 14. Centripetal builds and sells software and appliances for network security using these patented technologies. Centripetal's CleanINTERNET® solutions utilize its patented Threat Intelligence Gateway, which allows organizations to eradicate threats based on threat intelligence enforcement and catch unknown threats.



Ex. 6, https://www.centripetal.ai/cleaninternet.

- 15. Centripetal's patented technologies also provide insight into an organization's security posture and gain visibility into threats. Centripetal's Threat Intelligence Gateway includes the RuleGATE Gateway series, which are ultra-high performance threat intelligence gateways with real-time attack visualization and analytics. Ex. 7,
- https://www.centripetalnetworks.com/hubfs/Centripetal_Networks_September2017/PDF/CNI-RuleGATE2000.pdf.
- 16. In recognition of its innovation and expertise, the U.S. Patent Office awarded Centripetal numerous patents that cover its key technological advances in the network security industry. Centripetal continues to apply for additional patents covering its innovations in the United States and around the world resulting directly from Centripetal's research and development efforts.

17. Centripetal has been recognized as an innovative technology company. For example, Centripetal was named the SINET 16 Innovator for 2017 at the SINET Showcase in Washington D.C. A leading research and advisory company, Gartner Research, recognized Centripetal as a Cool Vendor in Security for Technology and Service Providers in 2017. In both 2019 and 2020, Centripetal was ranked as one of the fastest growing technology companies in North America on Deloitte's 2020 Technology Fast 500.

CENTRIPETAL'S ASSERTED PATENTS

- 18. On January 21, 2020, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,542,028 (the "'028 Patent"), entitled "Rule-Based Network-Threat Detection." The '028 patent application published on December 19, 2019 as US 2019/0387013. A true and correct copy of the '028 Patent is attached hereto as Exhibit 1.
- 19. The '028 Patent is generally directed towards computer networks, and more particularly, provides a system to protect computer networks from network threats. One of the ways this is accomplished is by filtering network data packet transfers based on one or more rules corresponding to one or more network-threat indicators to facilitate the protection of computers and networks from network threats.
- 20. On August 25, 2020, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,757,126 (the "126 Patent"), entitled "Rule-Based Network-Threat Detection." The '126 patent application published on July 2, 2020 as US 2020/0213342. A true and correct copy of the '126 Patent is attached hereto as Exhibit 2.
- 21. The '126 Patent is generally directed towards computer networks, and more particularly, provides a system to protect computer networks from network threats. One of the ways this is accomplished is filtering network data packet transfers based on one or more rules

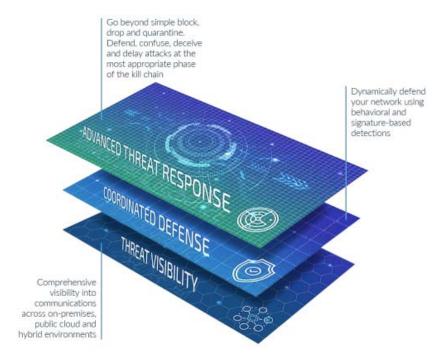
corresponding to one or more network-threat indicators to facilitate the protection of computers and networks from network threats.

- 22. On February 18, 2020, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,567,437 (the "'437 Patent"), entitled "Methods and Systems for Protecting a Secured Network." The '437 patent application published on July 25, 2019 as US 2019/0230128. A true and correct copy of the '437 Patent is attached hereto as Exhibit 3.
- 23. The '437 Patent is generally directed towards computer networks, and more particularly, provides a system to protect computer networks from attacks. One of the ways this is accomplished is filtering network data packet transfers based on dynamic security policies to facilitate the protection of computers and networks from network threats.
- 24. On September 22, 2020, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,785,266 (the "266 Patent"), entitled "Methods and Systems for Protecting a Secured Network." The '266 patent application published on April 30, 2020 as US 2020/0137121. A true and correct copy of the '266 Patent is attached hereto as Exhibit 4.
- 25. The '266 Patent is generally directed towards computer networks, and more particularly, provides a system to protect computer networks from attacks. One of the ways this is accomplished is filtering network data packet transfers based on dynamic security policies to facilitate the protection of computers and networks from network threats.
- 26. On August 4, 2020, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,735,380 (the "'380 Patent"), entitled "Filtering Network Data Transfers." The '380 patent application published on June 11, 2020 as US 2020/0186498. A true and correct copy of the '380 Patent is attached hereto as Exhibit 5.

- 27. The '380 Patent is generally directed totowards computer networks, and more particularly, provides a system to protect computer networks from network threats. One of the ways this is accomplished is filtering network data packet transfers based on one or more rules to facilitate the protection of computers and networks from network threats.
- 28. Centripetal owns by assignment the entire right, title, and interest in and to the '028 Patent, '126 Patent, '437 Patent, '266 Patent, and the '380 Patent (collectively, "the Asserted Patents").
 - 29. All of the Asserted Patents are valid and enforceable.

LOOKINGGLASS AND ITS PRODUCTS

30. LookingGlass is a cyber-security software company which helps organizations of all sizes protect themselves against cybersecurity threats. Ex. 8, https://web.archive.org/web/20210303081823/https://lookingglasscyber.com/products/automat ed-threat-response/cloudshield-eclipse/. LookingGlass provides products that deliver cybersecurity and intelligence to its customers. LookingGlass advertises that it helps its customers acquire actionable threat data feeds in the form of machine-readable threat intelligence or extend their security operations with LookingGlass threat intelligence.



Ex. 9, https://www.lookingglasscyber.com/wp-content/uploads/2020/11/CloudShield-Eclipse_Data-Sheet_11-17-2020.pdf.

31. To do this, LookingGlass sells a platform that will contextualize, prioritize, and manage threat intelligence. Additionally, they provide network mitigation capabilities enabled our threat intelligence to defend their assets. LookingGlass advertises that it addresses the full spectrum of threats including structured threats and Indicators of Compromise, unstructured and open source risk data, internal network telemetry, and physical threats.



Ex. 10, https://www.lookingglasscyber.com/wpcontent/uploads/2016/02/0216 LookingGlass DNS Defender-Data-Sheet.pdf.

- 32. LookingGlass makes, uses, and sells its CloudShield Eclipse product ("CloudShield"), which is also known as Aeonik. CloudShield is a network detection and response platform that delivers customized, stealthy, and active cyber defense capabilities. Ex. 9, https://www.lookingglasscyber.com/wp-content/uploads/2020/11/CloudShield-Eclipse Data-Sheet 11-17-2020.pdf. CloudShield combines threat intelligence data with the functionality of Asset Inventory and Tracking, Threat and Anomaly detection, Intrusion Prevention, and Network Traffic Analysis solutions. CloudShield provides comprehensive network visibility, and supports advanced threat detection and inline response at machinespeed. In particular, CloudShield operationalize threat intelligence at machine speed at a network perimeter to deliver dynamic protection and for advanced mitigation of threats.
- 33. LookingGlass makes, uses, and sells its scoutShield product, which is a low touch security appliance that automatically ingests machine readable threat intelligence to automatically block malicious threats. Ex. 11, https://www.lookingglasscyber.com/wp-

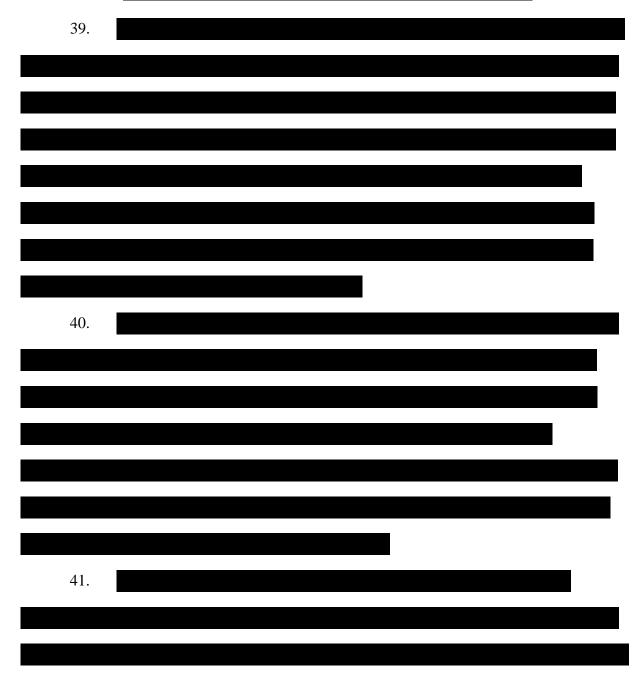
content/uploads/2017/09/scoutSHIELD_Data-Sheet_Online_May2019.pdf. For example, scoutShield will block used threat intelligence rulesets that are based on malicious C2 domain feeds, phishing URL feeds, and malicious URL feeds.

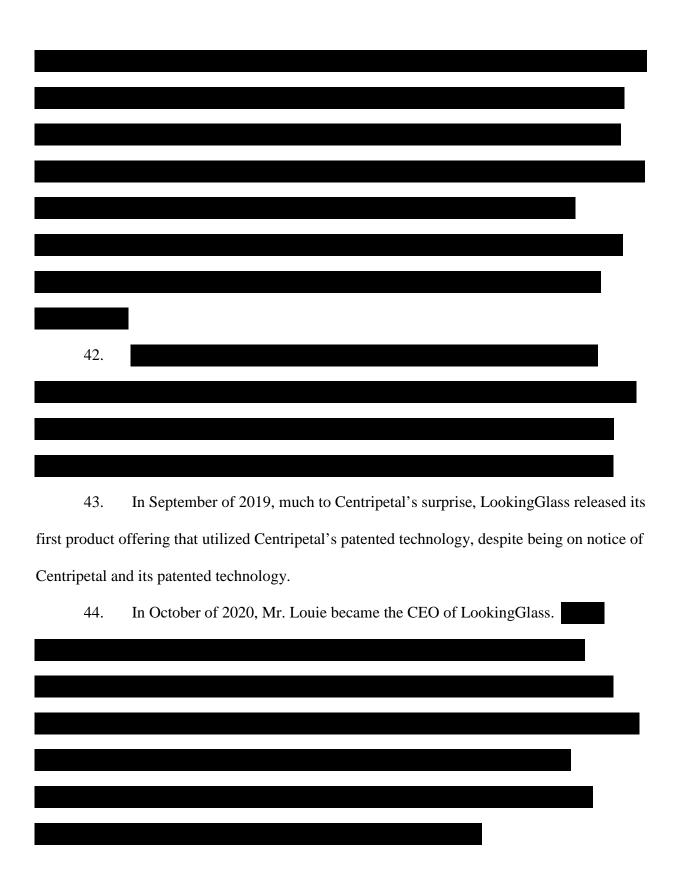
- 34. LookingGlass makes, uses, and sells its scoutPRIME product, which is a cybersecurity situational aware platform that identifies external threats by using threat intelligence. Ex. 12, https://www.lookingglasscyber.com/products/threatplatforms/scoutprime/.
- 35. LookingGlass makes, uses, and sells its DNS Defender products, which is a firewall product that mitigates threats related to DNS. Ex. 10, https://www.lookingglasscyber.com/wpcontent/uploads/2016/02/0216_LookingGlass_DNS_Defender-Data-Sheet.pdf.
- 36. LookingGlass has infringed and continues to infringe one or more claims of each of the Asserted Patents by engaging in acts that constitute infringement under 35 U.S.C. § 271, including but not necessarily limited to
- 37. LookingGlass has infringed and continues to infringe one or more claims of each of the Asserted Patents by engaging in acts that constitute infringement under 35 U.S.C. § 271, including but not necessarily limited to making, using, selling, and/or offering for sale, in this district and elsewhere in the United States, and/or importing into this district and elsewhere in the United States Centripetal's patented technology, including in the accused CloudShield and scoutShield products alone or in conjunction with one another and related services (collectively, "the Accused Products").
- 38. Centripetal's products and services are marked with Centripetal's patents. For example, Centripetal's products are marked with the '028 Patent, '126 Patent, '437 Patent, '266

Patent, and the '380 Patent. Ex. 13,

https://www.centripetal.ai/legal? hstc=98722881.83379b6542bff476abf41ef99a471a87.1613
070891083.1613070891083.1614036867078.2&_hssc=98722881.1.1614036867078&_hsfp
=2496945082..2&_hssc=98722881.1.1614036867078&_hsfp=2496945082.

DEFENDANTS' RELATIONSHIP WITH CENTRIPETAL





- Centripetal is informed and believes that Alsop Louie aided and abetted in Mr. 46. Louie's violations of his obligations to Centripetal.
- 47. LookingGlass has willfully infringed each of the Asserted Patents. Centripetal is informed and believes that LookingGlass had knowledge of the Asserted Patents through various channels and despite its knowledge of Centripetal's patent rights, engaged in egregious behavior warranting enhanced damages.
- 48. Centripetal is informed and believes that despite LookingGlass's knowledge of the Asserted Patents and Centripetal's patented technology, LookingGlass made the deliberate decision to sell products and services that it knew infringes Centripetal's Asserted Patents.
- 49. Centripetal is informed and believes that LookingGlass has undertaken no efforts to avoid infringement of the Asserted Patents, despite LookingGlass's knowledge and understanding that LookingGlass's products and services infringe these patents. Thus, LookingGlass's infringement of Asserted Patents is willful and egregious, warranting enhancement of damages.
- 50. Centripetal is informed and believes that LookingGlass knew or was willfully blind to Centripetal's technology. Despite this knowledge and/or willful blindness, LookingGlass has acted with blatant and egregious disregard for Centripetal's patent rights with an objectively high likelihood of infringement.

51. In addition to directly infringing the Asserted Patents pursuant to 35 U.S.C. § 271(a), either literally or under the doctrine of equivalents, or both, LookingGlass indirectly infringes all the Asserted Patents. LookingGlass induces infringement of the Asserted Patents by instructing, directing and/or requiring others, including its customers, purchasers, users, and developers, to meet claim elements, either literally or under the doctrine of equivalents, or both, of the Asserted Patents. LookingGlass contributorily infringes the Asserted Patents by developing products that are used by its customers, purchasers, users, and developer as component in a system that together meets all claim elements in the Asserted Patents. Centripetal is informed and believes that LookingGlass was been aware of the Asserted Patents, and has done nothing to curtail its infringement. However, at minimum, LookingGlass has become aware of its continued infringement as a result of receiving this Complaint.

FIRST CAUSE OF ACTION (Direct Infringement of the '028 Patent pursuant to 35 U.S.C. § 271(a))

- 52. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
- 53. LookingGlass has infringed and continues to infringe a least Claims 1-3, 8-10, 15-17, and 19-20 of the '028 Patent.
- 54. LookingGlass's infringement is based upon literal infringement or infringement under the doctrine of equivalents, or both.
- 55. LookingGlass's acts of making, using, importing, selling, and/or offering for sale infringing products and services have been without the permission, consent, authorization, or license of Centripetal.
- 56. LookingGlass's infringement includes, but is not limited to, the manufacture, use, sale, importation and/or offer for sale of Centripetal's patented technology covered by the

'028 Patent, these products, services, and technologies including, but not limited to those under the marketing name: scoutShield (the "'028 Accused Products"). LookingGlass also infringes these claims jointly with its customers, vendors, distributors, subsidiaries, and/or other agents of LookingGlass, to the extent specific components are provided by those customers or vendors. LookingGlass directs and controls the systems and methods in the claims and obtains benefits from the control of the system of the whole. In particular, LookingGlass put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base.

57. LookingGlass infringes the '028 Patent at least because it has at least one processor; and memory comprising instructions that, when executed by the at least one processor, cause the packet filtering device to: receive a plurality of packet filtering rules configured to cause the packet filtering device to identify packets corresponding to at least one of a plurality of network-threat indicators, wherein the plurality of network-threat indicators are associated with network-threat-intelligence reports supplied by one or more independent network-threat-intelligence providers; receive a plurality of packets that comprises a first packet and a second packet; responsive to a determination that the first packet satisfies a first packet filtering rule, of the plurality of packet filtering rules, based on one or more networkthreat indicators, of the plurality of network-threat indicators, specified by the first packet filtering rule: apply, to the first packet, an operator specified by the first packet filtering rule and configured to cause the packet filtering device to allow the first packet to continue toward a destination of the first packet; and communicate information that identifies the one or more network-threat indicators and data indicative that the first packet was allowed to continue toward the destination of the first packet; receive an update to at least one packet filtering rule;

modify, based on the received update to the at least one packet filtering rule, at least one operator specified by the first packet filtering rule to reconfigure the packet filtering device to prevent packets corresponding to the one or more network-threat indicators from continuing toward their respective destinations; and responsive to a determination that the second packet satisfies the first packet filtering rule: based on the modified at least one operator specified by the first packet filtering rule, prevent the second packet from continuing toward a destination of the second packet; and communicate data indicative that the second packet was prevented from continuing toward the destination of the second packet.

58. The '028 Accused Products are packet filtering devices. For example, scoutSHIELD is a packet filtering device that operates on LookingGlass appliances, such as the CS-4000E or IRD-100, or operates on servers in the Cloud. Both the Cloud and Appliance offerings include processors and memory.

Network Stealth

LookingGlass Deep Packet Processing makes CS-4KE applications, and any appliance network-attached to the CS-4KE, invisible on the network. Stealth applications cannot be attacked or evaded by threat actors, enhancing security. Deep Packet Processing enables unique and innovative traffic flow controls, such as one-way communications to a Safe Sensor Enclave of invisible network security devices, cloning traffic to

multiple malware sensors, or rule-based traffic tagging for faster security forensics.

Deep Packet Processing

LookingGlass Deep Packet Processing (DPP) is fully programmable, enabling rapid response to changing network and security challenges. The chassis accommodates up to three DPP modules (DPPM), equipped with both a layer 2-4 Flow Acceleration System (FAST) for comprehensive layer 2-4 classification, switching and modification, and a layer 2-7 processing system with a regular expression (REGEX) processing

> engine and a dedicated DPPM-resident NPU for applications.

High Speed Ethernet Ports

The CS-4KE accommodates one or two switches per chassis, each including eight

10Gbps Ethernet ports with small-form-factor pluggable (SFP+) interfaces. The switching configuration is secure, under the control of the dedicated management server.

Content Processing Accelorator (CPA)

Optimized industry-standard network applications that can

operate on up to three CPA modules per chassis. A CS-4KE CPA has dual multi-core Xeon processors with 48GB of memory with 800GB SSD.

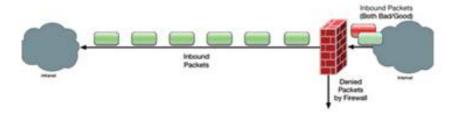
Ex. 14, https://www.lookingglasscyber.com/wp-

content/uploads/2016/04/cs_4000e_datasheet_online.pdf.

- 59. Additionally, scoutSHIELD receives packet filtering rules, such as Automated Data Services (ADS) machine-readable threat intelligence to automatically block known phishing URLs, malicious URLs, and malicious C2 Domains. These packet filtering rules cause scoutSHIELD to identify packets related to these network threat indicators. ADS' network threat indicators are associated with independent threat intelligence reports.
- 60. Furthermore, scoutSHIELD monitors both incoming and outgoing network traffic using its Deep Packet Processing Module (DPPM), which inspects packets at line speed and performs filtering to allow traffic or block the latest threats based on the updated threat feeds. The threat feeds are provided real-time and updated daily. The packet filtering rules are modified based on the updated threat intelligence. For example, a domain that was previously deemed safe (and traffic allowed) would be updated to block traffic to and from that domain once the domain is deemed unsafe.

With a TIG, security professionals can now deploy enhanced threat response (including rules) without having to impact or change their existing traditional security tools such as firewalls, IDS and web content inspection.

A typical deployment (as shown below), allows organizations to deploy the TIG inline to the network data plane as complementary to the existing security infrastructure.



The TIG adds a level of protection as it is invisible in the network path, unlike traditional firewalls, making it harder for adversaries to discover and avoid deployed detection capabilities.

- Ex. 15, https://lookingglasscyber.com/blog/security-corner/real-time-threat-killer-automatedthreat-intelligence-gateway-to-the-rescue/.
- 61. In addition, scoutSHIELD communicates information in real-time whether traffic was blocked or allowed using Appliance, System, Threat Intelligence, and Threat Mitigation Dashboards.





Appliance Monitoring

Threat Mitigation Monitoring





Threat Intelligence Monitoring

Management System Monitoring

- Ex. 11, https://www.lookingglasscyber.com/wp-content/uploads/2017/09/scoutSHIELD_Data-Sheet_Online_May2019.pdf.
- 62. As a result of LookingGlass's unlawful activities, Centripetal has suffered and will continue to suffer irreparable harm for which there is no adequate remedy at law.

 Accordingly, Centripetal is entitled to preliminary and/or permanent injunctive relief.
- 63. LookingGlass has willfully infringed the '028 Patent. Centripetal is informed and believes that LookingGlass had knowledge of the '028 Patent through various channels, and despite its knowledge of Centripetal's patent rights, engaged in egregious behavior warranting enhanced damages.
- 64. LookingGlass thus knew or, in the alternative, was willfully blind to Centripetal's technology and the '028 Patent.

- 65. Despite this knowledge and/or willful blindness, LookingGlass has acted with blatant and egregious disregard for Centripetal's patent rights with an objectively high likelihood of infringement.
- 66. Centripetal is informed and believes that LookingGlass has undertaken no efforts to design these products or services around the '028 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the Asserted Patents. As such, LookingGlass has acted and continues to act recklessly, willfully, wantonly, deliberately, and egregiously engage in acts of infringement of the '028 Patent, justifying an award to Centripetal of increased damages under 35 U.S.C. § 284, and attorneys' fees and costs incurred under 35 U.S.C. § 285.
- 67. LookingGlass's infringement of the '028 Patent has injured and continues to injure Centripetal in an amount to be proven at trial, but not less than a reasonable royalty.
- 68. LookingGlass's infringement has caused and is continuing to cause damage and irreparable injury to Centripetal, and Centripetal will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court.
- 69. Centripetal is entitled to injunctive relief, damages and any other relief in accordance with 35 U.S.C. §§ 283, 284 and 285.

SECOND CAUSE OF ACTION (Indirect Infringement of the '028 Patent)

- 70. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
- 71. LookingGlass has induced and continues to induce infringement of one or more claims of the '028 Patent under 35 U.S.C. § 271(b). LookingGlass has contributorily infringed

and continues to contributorily infringe of one or more claims of the '028 Patent under 35 U.S.C. § 271(c).

- 72. LookingGlass knew or, in the alternative, was willfully blind to Centripetal's technology and the '028 Patent. Centripetal is informed and believes that LookingGlass has undertaken no efforts to design these products or services around the '028 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the '028 Patent. LookingGlass has also designed its products in a manner where it specifically intends them to infringe. Alternatively, LookingGlass knows of the infringement of the '028 Patent as a result of this complaint.
- 73. LookingGlass indirectly infringes the '028 Patent pursuant to 35 U.S.C. § 271(b) by instructing, directing and/or requiring others, including its customers, purchasers, users, developers, vendors, and/or agents to perform one or more of the steps of the method claims, or provide one or more component of a system or computer-readable medium claims, either literally or under the doctrine of equivalents. All the elements of the claims are used either LookingGlass, its customers, purchasers, users, developers, vendors, and/or agents, or some combination thereof. LookingGlass knew or was willfully blind to the fact that it was inducing others to infringe by practicing, either themselves or in conjunction with LookingGlass, one or more claims of the '028 Patent, including Claims 1-3, 8-10, 15-17, and 19-20.
- 74. LookingGlass knowingly and actively aided and abetted the direct infringement of the '028 Patent by instructing and encouraging its customers, purchasers, users, developers, vendors, and/or agents to meet the elements of the '028 Patent with the '028 Accused Products. Such use is consistent with how the products are described to directly infringe the '028 Patent,

as described above and is incorporated by reference. Such knowing instructions and encouragement included, but is not limited to, advising third parties to use the '028 Accused Products in an infringing manner through direct communications with customers via training, support services, or sales calls, providing a mechanism through which third parties may infringe, and by advertising and promoting the use of the '028 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to setup the '028 Accused Products in an infringing manner. Furthermore, LookingGlass's customers also directly infringe these claims jointly with LookingGlass and its vendors, to the extent specific components are provided by those entities. LookingGlass's customers direct and control the systems and methods in the claims and obtains benefits from the control of the system of the whole. LookingGlass's customers put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base.

- 75. LookingGlass updates and maintains an HTTP site called "Resources" that includes technical documentation encouraging the use of the '028 Accused Products in an infringing manner. This technical documentation includes whitepapers, events, case studies, data sheets, and videos that cover the operation of the '028 Accused Products in-depth, including by advertising the '028 Accused Products' infringing security features and instructing consumers to configure and use the '028 Accused Products in an infringing manner. See, e.g., Ex. 16, https://lookingglasscyber.com/resources/.
- 76. LookingGlass indirectly infringes the '028 Patent pursuant to 35 U.S.C. § 271(c) because it has provided software and computer systems with software installed, that act as a material component of claims of the '028 Patent. In particular, LookingGlass knows that

its products are particularly suited to be used in an infringing manner and are particularly suited for this use. Furthermore, the '028 Accused Products are highly developed and specialized security products, and are not staple articles or commodities of commerce because they must be installed and used in an infringing manner, as described in the direct infringement claim above.

LookingGlass knowingly and actively contributed to the direct infringement of 77. the '028 Patent by instructing and encouraging its customers, purchasers, users, developers, vendors, and/or agents to meet the elements of the '028 Patent with the '028 Accused Products. Such use is consistent with how the products are described to directly infringe the '028 Patent, as described above and is incorporated by reference. Such knowing instructions and encouragement included, but is not limited to, advising third parties to use the '028 Accused Products in an infringing manner through direct communications with customers via training, support services, or sales calls, providing a mechanism through which third parties may infringe, and by advertising and promoting the use of the '028 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to setup the '028 Accused Products in an infringing manner. Furthermore, LookingGlass's customers also directly infringe these claims jointly with LookingGlass and its vendors, to the extent specific components are provided by those entities. LookingGlass's customers direct and control the systems and methods in the claims and obtains benefits from the control of the system of the whole. LookingGlass's customers put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base. LookingGlass knew or was willfully blind to the fact that it was contributing to the infringement of others by practicing, either themselves or in conjunction

with LookingGlass, one or more claims of the '028 Patent, including Claims 1-3, 8-10, 15-17, and 19-20.

- 78. LookingGlass updates and maintains an HTTP site called "Resources" that includes technical documentation encouraging the use of the '028 Accused Products in an infringing manner. This technical documentation includes whitepapers, events, case studies, data sheets, and videos that cover the operation of the '028 Accused Products in-depth, including by advertising the '028 Accused Products' infringing security features and instructing consumers to configure and use the '028 Accused Products in an infringing manner. See, e.g., Ex. 16, https://lookingglasscyber.com/resources/.
- 79. LookingGlass's indirect infringement has caused and is continuing to cause damage and irreparable injury to Centripetal, and Centripetal will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court.
- 80. LookingGlass has known or, in the alternative, has been willfully blind to Centripetal's technology and the '028 Patent. Centripetal is informed and believes that LookingGlass has undertaken no efforts to design these products or services around the '028 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the '028 Patent.
- 81. Centripetal is entitled to injunctive relief, damages and any other relief in accordance with 35 U.S.C. §§ 283, 284 and 285.

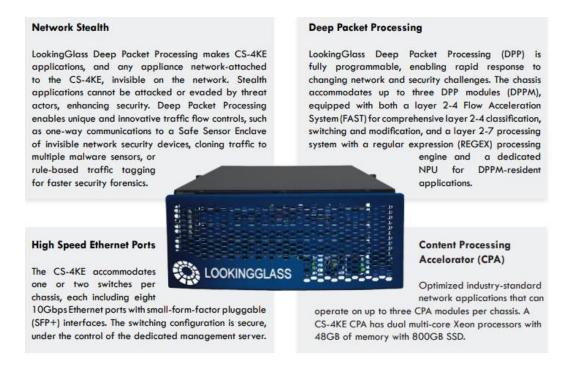
THIRD CAUSE OF ACTION (Direct Infringement of the '126 Patent pursuant to 35 U.S.C. § 271(a))

82. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

- 83. LookingGlass has infringed and continues to infringe a least Claims 1-3, 5-6, 8-10, 12-13, 15-17, and 19-20 of the '126 Patent.
- 84. LookingGlass's infringement is based upon literal infringement or infringement under the doctrine of equivalents, or both.
- 85. LookingGlass's acts of making, using, importing, selling, and/or offering for sale infringing products and services have been without the permission, consent, authorization, or license of Centripetal.
- 86. LookingGlass's infringement includes, but is not limited to, the manufacture, use, sale, importation and/or offer for sale of Centripetal's patented technology covered by the '126 Patent, these products, services, and technologies including, but not limited to those under the marketing name: scoutShield (the "' '126 Accused Products"). LookingGlass also infringes these claims jointly with its customers, vendors, distributors, subsidiaries, and/or other agents of LookingGlass, to the extent specific components are provided by those customers or vendors. LookingGlass directs and controls the systems and methods in the claims and obtains benefits from the control of the system of the whole. In particular, LookingGlass put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base.
- 87. LookingGlass infringes the '126 Patent at least because it has one or more processors; and memory storing instructions that, when executed by the one or more processors, cause the packet filtering device to: receive, from a rule provider device, a plurality of packet filtering rules configured to cause the packet filtering device to identify packets corresponding to at least one of a plurality of network-threat indicators, wherein the plurality of packet filtering rules were generated by the rule provider device based on network threat

intelligent reports supplied by one or more independent network-threat-intelligence providers, and wherein the plurality of network-threat indicators comprise unique Internet host addresses or names; responsive to a determination that a first packet satisfies a first packet filtering rule of the plurality of packet filtering rules based on one or more network-threat indicators specified by the first packet filtering rule: apply, to the first packet, an operator specified by the first packet filtering rule and configured to cause the packet filtering device to allow the first packet to continue toward a destination of the first packet; and communicate, to the rule provider device, data indicative that the first packet was allowed to continue toward the destination of the first packet; receive, from the rule provider device, an update to at least one packet filtering rule; modify, based on the received update to the at least one packet filtering rule, the first packet filtering rule to reconfigure the packet filtering device to prevent packets corresponding to the one or more network-threat indicators from continuing toward their respective destinations; and responsive to a determination that a second packet satisfies the modified first packet filtering rule: prevent, based on at least one operator specified by the modified first packet filtering rule, the second packet from continuing toward a destination of the second packet; and communicate, to the rule provider device, data indicative that the second packet was prevented from continuing toward the destination of the second packet

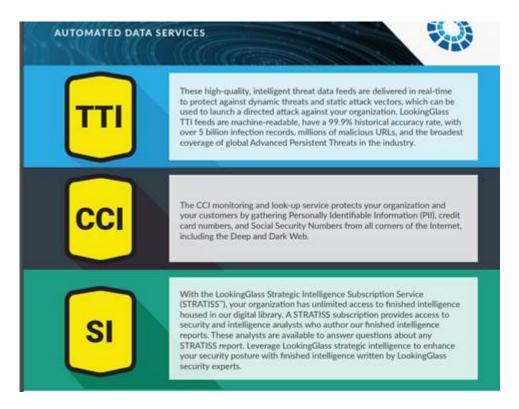
88. The '126 Accused Products are packet filtering devices that operates on LookingGlass appliances, such as the CS-4000E or IRD-100, or operates on servers in the Cloud. Both the Cloud and Appliance offerings include processors and memory to perform the steps of the Claim.



Ex. 14, https://www.lookingglasscyber.com/wp- content/uploads/2016/04/cs_4000e_datasheet_online.pdf.

89. scoutSHIELD receives packet filtering rules, such as Automated Data Services (ADS) machine-readable threat intelligence to automatically block known phishing URLs, malicious URLs, and malicious C2 Domains. These packet filtering rules cause scoutSHIELD to identify packets related to these network threat indicators. ADS' network threat indicators are associated with independent threat intelligence reports. The network threat indicators include Internet host addresses or names deemed to relate to network threats.





Ex. 17, https://www.lookingglasscyber.com/wp-content/uploads/2017/09/ADS Data-Sheet Online Feb2019.pdf.

90. Additionally, scoutSHIELD monitors both incoming and outgoing network traffic using its Deep Packet Processing Module (DPPM), which inspects packets at line speed and performs filtering to allow traffic or block the latest threats based on the updated threat feeds. The threat feeds are provided real-time and updated daily. The packet filtering rules are modified based on the updated threat intelligence. For example, a domain that was previously deemed safe (and traffic allowed) would be updated to block traffic to and from that domain once the domain is deemed unsafe. scoutSHIELD communicates information in real-time whether traffic was blocked or allowed using Appliance, System, Threat Intelligence, and Threat Mitigation Dashboards.





Appliance Monitoring

Threat Mitigation Monitoring





Threat Intelligence Monitoring

Management System Monitoring

- Ex. 11, https://www.lookingglasscyber.com/wp-content/uploads/2017/09/scoutSHIELD_Data-Sheet_Online_May2019.pdf.
- 91. As a result of LookingGlass's unlawful activities, Centripetal has suffered and will continue to suffer irreparable harm for which there is no adequate remedy at law.

 Accordingly, Centripetal is entitled to preliminary and/or permanent injunctive relief.
- 92. LookingGlass has willfully infringed the '126 Patent. Centripetal is informed and believes that LookingGlass had knowledge of the '126 Patent through various channels, and despite its knowledge of Centripetal's patent rights, engaged in egregious behavior warranting enhanced damages.

- 93. LookingGlass thus knew or, in the alternative, was willfully blind to Centripetal's technology and the '126 Patent.
- 94. Despite this knowledge and/or willful blindness, LookingGlass has acted with blatant and egregious disregard for Centripetal's patent rights with an objectively high likelihood of infringement.
- 95. Centripetal is informed and believes that LookingGlass has undertaken no efforts to design these products or services around the '126 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the Asserted Patents. As such, LookingGlass has acted and continues to act recklessly, willfully, wantonly, deliberately, and egregiously engage in acts of infringement of the '126 Patent, justifying an award to Centripetal of increased damages under 35 U.S.C. § 284, and attorneys' fees and costs incurred under 35 U.S.C. § 285.
- 96. LookingGlass's infringement of the '126 Patent has injured and continues to injure Centripetal in an amount to be proven at trial, but not less than a reasonable royalty.
- 97. LookingGlass's infringement has caused and is continuing to cause damage and irreparable injury to Centripetal, and Centripetal will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court.
- 98. Centripetal is entitled to injunctive relief, damages and any other relief in accordance with 35 U.S.C. §§ 283, 284 and 285.

FOURTH CAUSE OF ACTION (Indirect Infringement of the '126 Patent)

99. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

- 100. LookingGlass has induced and continues to induce infringement of one or more claims of the '126 Patent under 35 U.S.C. § 271(b). LookingGlass has contributorily infringed and continues to contributorily infringe of one or more claims of the '126 Patent under 35 U.S.C. § 271(c).
- LookingGlass knew or, in the alternative, was willfully blind to Centripetal's 101. technology and the '126 Patent. Centripetal is informed and believes that LookingGlass has undertaken no efforts to design these products or services around the '126 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the '126 Patent. LookingGlass has also designed its products in a manner where it specifically intends them to infringe. Alternatively, LookingGlass knows of the infringement of the '126 Patent as a result of this complaint.
- 102. LookingGlass induces the infringement of the '126 Patent pursuant to 35 U.S.C. § 271(b) by instructing, directing and/or requiring others, including its customers, purchasers, users, developers, vendors, and/or agents to perform one or more of the steps of the method claims, or provide one or more component of a system or computer-readable medium claims, either literally or under the doctrine of equivalents. All the elements of the claims are used either LookingGlass, its customers, purchasers, users, developers, vendors, and/or agents, or some combination thereof. LookingGlass knew or was willfully blind to the fact that it was inducing others to infringe by practicing, either themselves or in conjunction with LookingGlass, one or more claims of the '126 Patent, including Claims 1-3, 5-6, 8-10, 12-13, 15-17, and 19-20.
- 103. LookingGlass knowingly and actively aided and abetted the direct infringement of the '126 Patent by instructing and encouraging its customers, purchasers, users, developers,

vendors, and/or agents to meet the elements of the '126 Patent with the '126 Accused Products. Such use is consistent with how the products are described to directly infringe the '126 Patent, as described above and is incorporated by reference. Such knowing instructions and encouragement included, but is not limited to, advising third parties to use the '126 Accused Products in an infringing manner through direct communications with customers via training, support services, or sales calls, providing a mechanism through which third parties may infringe, and by advertising and promoting the use of the '126 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to setup the '126 Accused Products in an infringing manner. Furthermore, LookingGlass's customers also directly infringe these claims jointly with LookingGlass and its vendors, to the extent specific components are provided by those entities. LookingGlass's customers direct and control the systems and methods in the claims and obtains benefits from the control of the system of the whole. LookingGlass's customers put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base.

LookingGlass updates and maintains an HTTP site called "Resources" that 104. includes technical documentation encouraging the use of the '126 Accused Products in an infringing manner. This technical documentation includes whitepapers, events, case studies, data sheets, and videos that cover the operation of the '126 Accused Products in-depth, including by advertising the '126 Accused Products' infringing security features and instructing consumers to configure and use the '126 Accused Products in an infringing manner. See, e.g., Ex. 16, https://lookingglasscyber.com/resources/.

- U.S.C. § 271(c) because it has provided software and computer systems with software installed, that act as a material component of claims of the '126 Patent. In particular, LookingGlass knows that its products are particularly suited to be used in an infringing manner and are particularly suited for this use. Furthermore, the '126 Accused Products are highly developed and specialized security products, and are not staple articles or commodities of commerce because they must be installed and used in an infringing manner, as described in the direct infringement claim above.
- 106. LookingGlass knowingly and actively contributed to the direct infringement of the '126 Patent by instructing and encouraging its customers, purchasers, users, developers, vendors, and/or agents to meet the elements of the '126 Patent with the '126 Accused Products. Such use is consistent with how the products are described to directly infringe the '126 Patent, as described above and is incorporated by reference. Such knowing instructions and encouragement included, but is not limited to, advising third parties to use the '126 Accused Products in an infringing manner through direct communications with customers via training, support services, or sales calls, providing a mechanism through which third parties may infringe, and by advertising and promoting the use of the '126 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to setup the '126 Accused Products in an infringing manner. Furthermore, LookingGlass's customers also directly infringe these claims jointly with LookingGlass and its vendors, to the extent specific components are provided by those entities. LookingGlass's customers direct and control the systems and methods in the claims and obtains benefits from the control of the system of the whole. LookingGlass's customers put the systems and methods described in the

claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base. LookingGlass knew or was willfully blind to the fact that it was contributing to the infringement of others by practicing, either themselves or in conjunction with LookingGlass, one or more claims of the '126 Patent, including Claims 1-3, 5-6, 8-10, 12-13, 15-17, and 19-20.

- 107. LookingGlass updates and maintains an HTTP site called "Resources" that includes technical documentation encouraging the use of the '126 Accused Products in an infringing manner. This technical documentation includes whitepapers, events, case studies, data sheets, and videos that cover the operation of the '126 Accused Products in-depth, including by advertising the '126 Accused Products' infringing security features and instructing consumers to configure and use the '126 Accused Products in an infringing manner. See, e.g., Ex. 16, https://lookingglasscyber.com/resources/.
- 108. LookingGlass's indirect infringement has caused and is continuing to cause damage and irreparable injury to Centripetal, and Centripetal will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court.
- 109. LookingGlass has known or, in the alternative, has been willfully blind to Centripetal's technology and the '126 Patent. Centripetal is informed and believes that LookingGlass has undertaken no efforts to design these products or services around the '126 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the '126 Patent.
- 110. Centripetal is entitled to injunctive relief, damages and any other relief in accordance with 35 U.S.C. §§ 283, 284 and 285.

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FIFTH CAUSE OF ACTION

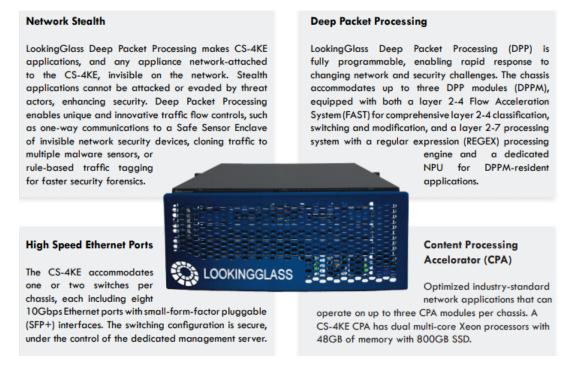
(Direct Infringement of the '437 Patent pursuant to 35 U.S.C. § 271(a))

- 111. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
- 112. LookingGlass has infringed and continues to infringe a least Claims 1, 4-8, 11-15, and 18-20 of the '437 Patent.
- LookingGlass's infringement is based upon literal infringement or infringement 113. under the doctrine of equivalents, or both.
- LookingGlass's acts of making, using, importing, selling, and/or offering for 114. sale infringing products and services have been without the permission, consent, authorization, or license of Centripetal.
- 115. LookingGlass infringes the '437 Patent at least because it has at least one processor; and memory storing instructions that when executed by the at least one processor cause the system to: provision a packet security gateway, of a plurality of packet security gateways that collectively provide an entire interface across a boundary of a network protected by the packet security gateway and one or more networks other than the network protected by the packet security gateway, with one or more packet filtering rules to be applied to all network traffic traversing the boundary, wherein each packet filtering rule comprises at least one packet matching criterion associated with malicious network traffic and a corresponding packet transformation function; and configure the packet security gateway to: receive, via a communication interface that does not have a network-layer address, network traffic traversing the boundary via the packet security gateway, wherein the network traffic comprises received packets and is associated with each host of a plurality of hosts located in the network protected by the packet security gateway, and wherein the received packets comprise: first packets

traversing the boundary, via the packet security gateway, that originate from outside the network protected by the packet security gateway and are destined for the plurality of hosts; and second packets traversing the boundary, via the packet security gateway, that originate from the plurality of hosts located in the network and are destined for devices in the one or more networks other than the network protected by the packet security gateway; responsive to a determination by the packet security gateway that a portion of the received packets corresponds to at least one packet matching criterion specified by the one or more packet filtering rules, drop the portion of the received packets; and modify a switching matrix of a local area network (LAN) switch associated with the packet security gateway such that the LAN switch is configured to drop the portion of the received packets responsive to the determination by the packet security gateway.

116. LookingGlass's infringement includes, but is not limited to, the manufacture, use, sale, importation and/or offer for sale of Centripetal's patented technology covered by the '437 Patent, these products, services, and technologies including, but not limited to those under the marketing names: scoutShield and CloudShield (the "'437 Accused Products"). LookingGlass also infringes these claims jointly with its customers, vendors, distributors, subsidiaries, and/or other agents of LookingGlass, to the extent specific components are provided by those customers or vendors. LookingGlass directs and controls the systems and methods in the claims and obtains benefits from the control of the system of the whole. In particular, LookingGlass put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base.

117. The '437 Accused Products are packet security gateways. For example, scoutSHIELD is "a high-assurance, zero touch Threat Intelligence Gateway that complements firewalls to automatically identify and block known phishing URLs, malicious URLs, and malicious C2s." Additionally, scoutSHIELD operates on LookingGlass appliances, such as the CS-4000E or IRD-100, or operates on servers in the Cloud. Both the Cloud and Appliance offerings include processors and memory to perform the steps of the Claim.



Ex. 14, https://www.lookingglasscyber.com/wp- content/uploads/2016/04/cs_4000e_datasheet_online.pdf.

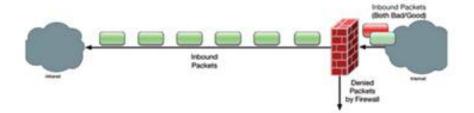
118. In one instance, scoutSHIELD receives packet filtering rules, such as LookingGlass' Automated Data Services (ADS) machine-readable threat intelligence which are used to automatically block known phishing URLs, malicious URLs, and malicious C2 Domains, and include a packet matching criterion (URLs, IP's, domains, etc.) and a corresponding packet transformation function, such as block or allow. Additionally, scoutSHIELD ADS feeds are automatically created or altered by ADS based on aggregated

threat information, such as the TTI threat feeds and records and the STRATISS intelligence reports.

119. Additionally, scoutSHIELD includes communication interface that do not have a network-layer address (e.g., No IP or MAC address), and monitors both incoming and outgoing network traffic using its Deep Packet Processing Module (DPPM), which inspects packets at line speed and performs filtering to allow traffic or block the latest threats based on the updated threat feeds. scoutSHIELD modifies the LAN switch to perform dropping of packets, under the control of the dedicated management server.

With a TIG, security professionals can now deploy enhanced threat response (including rules) without having to impact or change their existing traditional security tools such as firewalls, IDS and web content inspection.

A typical deployment (as shown below), allows organizations to deploy the TIG inline to the network data plane as complementary to the existing security infrastructure.



The TIG adds a level of protection as it is invisible in the network path, unlike traditional firewalls, making it harder for adversaries to discover and avoid deployed detection capabilities.

Ex. 15, https://lookingglasscyber.com/blog/security-corner/real-time-threat-killer-automatedthreat-intelligence-gateway-to-the-rescue/.

120. Furthermore, CloudShield (also known as Aeonik) is a software-based solution that operates on hardware appliances on premise and/or in the Cloud to perform network traffic

Ex. 18,

analysis, behavior and signature-based detection, threat intelligence, and advanced threat response at line rate to block malicious threats.

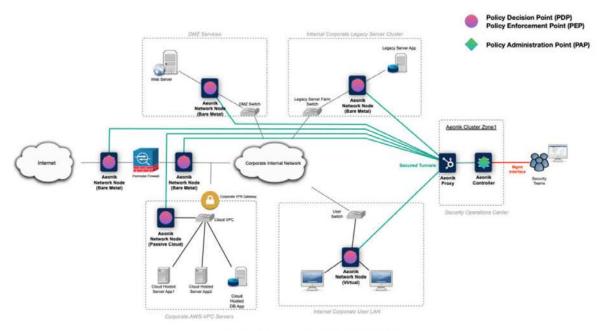
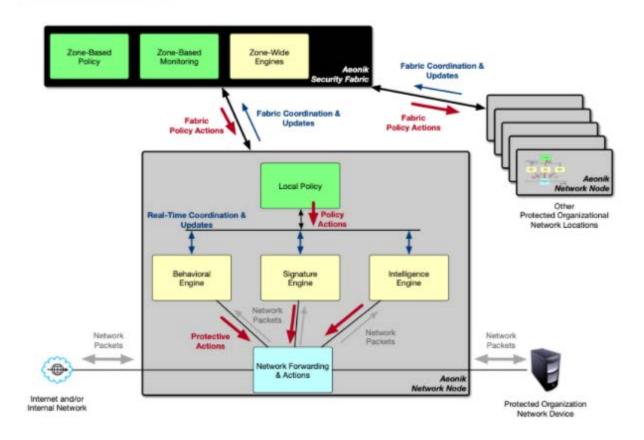


Figure 1: CloudShield Eclipse & Policy Architecture

https://web.archive.org/web/20210303083005/https://lookingglasscyber.com/blog/need-asmbghost-buster/; Ex. 19, https://www.lookingglasscyber.com/blog/making-cybersecuritypolicy-work-for-you-tunable-security-mitigation-at-attack-speed/.

121. For example, CloudShield is provisioned with packet filtering rules (included inside policies), which are applied to all inbound and outbound network traffic using advanced packet processing, for detection and mitigation of cybersecurity threats. Furthermore, CloudShield receives network traffic via communication interfaces that do not have IP or MAC network addresses.

Aeonik Power of 3 Detection & Response Engines



Ex. 20, https://www.linkedin.com/pulse/power-3-in-1-cybersecurity-allan-thomson/.

122. CloudShield also includes Policy Detection and Enforcement, which performs packet filtering on multiple layers, as shown below. CloudShield Eclipse performs "[v]isibility of *incoming threats to the network*" (IDS), "[m]itigation driven by detection engines [and] sensing" (IPS), "[m]itigation driven by known bad intelligence indicators" (Threat Intel Gateway), "[m]etadata and visibility across the network" (Network Traffic Analysis), and "Real-time mapping of everything on the network."

In addition to supporting a variety of areas, the organization can define policy that encompasses threat detection and mitigation leveraging one, some, or all of the security engines available within the CloudShield Eclipse.



Ex. 19, https://www.lookingglasscyber.com/blog/making-cybersecurity-policy-work-for-youtunable-security-mitigation-at-attack-speed/ (emphasis added).

- 123. CloudShield's packet filtering rules allow or block traffic based on rules associated with malicious network traffic, such as threat intelligence, signatures, and behaviors, and modifies the switching matrix of the LAN switch to drop the responsive packets.
- 124. As a result of LookingGlass's unlawful activities, Centripetal has suffered and will continue to suffer irreparable harm for which there is no adequate remedy at law. Accordingly, Centripetal is entitled to preliminary and/or permanent injunctive relief.

- 125. LookingGlass has willfully infringed the '437 Patent. Centripetal is informed and believes that LookingGlass had knowledge of the '437 Patent through various channels, and despite its knowledge of Centripetal's patent rights, engaged in egregious behavior warranting enhanced damages.
- 126. LookingGlass thus knew or, in the alternative, was willfully blind to Centripetal's technology and the '437 Patent.
- Despite this knowledge and/or willful blindness, LookingGlass has acted with 127. blatant and egregious disregard for Centripetal's patent rights with an objectively high likelihood of infringement.
- Centripetal is informed and believes that LookingGlass has undertaken no 128. efforts to design these products or services around the '437 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the Asserted Patents. As such, LookingGlass has acted and continues to act recklessly, willfully, wantonly, deliberately, and egregiously engage in acts of infringement of the '437 Patent, justifying an award to Centripetal of increased damages under 35 U.S.C. § 284, and attorneys' fees and costs incurred under 35 U.S.C. § 285.
- 129. LookingGlass's infringement of the '437 Patent has injured and continues to injure Centripetal in an amount to be proven at trial, but not less than a reasonable royalty.
- LookingGlass's infringement has caused and is continuing to cause damage and 130. irreparable injury to Centripetal, and Centripetal will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court.
- 131. Centripetal is entitled to injunctive relief, damages and any other relief in accordance with 35 U.S.C. §§ 283, 284 and 285.

SIXTH CAUSE OF ACTION (Indirect Infringement of the '437 Patent)

- 132. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
- 133. LookingGlass has induced and continues to induce infringement of one or more claims of the '437 Patent under 35 U.S.C. § 271(b). LookingGlass has contributorily infringed and continues to contributorily infringe of one or more claims of the '437 Patent under 35 U.S.C. § 271(c).
- 134. LookingGlass knew or, in the alternative, was willfully blind to Centripetal's technology and the '437 Patent. Centripetal is informed and believes that LookingGlass has undertaken no efforts to design these products or services around the '437 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the '437 Patent. LookingGlass has also designed its products in a manner where it specifically intends them to infringe. Alternatively, LookingGlass knows of the infringement of the '437 Patent as a result of this complaint.
- 135. LookingGlass induces the infringement of the '437 Patent pursuant to 35 U.S.C. § 271(b) by instructing, directing and/or requiring others, including its customers, purchasers, users, developers, vendors, and/or agents to perform one or more of the steps of the method claims, or provide one or more component of a system or computer-readable medium claims, either literally or under the doctrine of equivalents. All the elements of the claims are used either LookingGlass, its customers, purchasers, users, developers, vendors, and/or agents, or some combination thereof. LookingGlass knew or was willfully blind to the fact that it was inducing others to infringe by practicing, either themselves or in conjunction with

LookingGlass, one or more claims of the '437 Patent, including Claims 1, 4-8, 11-15, and 18-20.

- LookingGlass knowingly and actively aided and abetted the direct infringement 136. of the '437 Patent by instructing and encouraging its customers, purchasers, users, developers, vendors, and/or agents to meet the elements of the '437 Patent with the '437 Accused Products. Such use is consistent with how the products are described to directly infringe the '437 Patent, as described above and is incorporated by reference. Such knowing instructions and encouragement included, but is not limited to, advising third parties to use the '437 Accused Products in an infringing manner through direct communications with customers via training, support services, or sales calls, providing a mechanism through which third parties may infringe, and by advertising and promoting the use of the '437 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to setup the '437 Accused Products in an infringing manner. Furthermore, LookingGlass's customers also directly infringe these claims jointly with LookingGlass and its vendors, to the extent specific components are provided by those entities. LookingGlass's customers direct and control the systems and methods in the claims and obtains benefits from the control of the system of the whole. LookingGlass's customers put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base.
- 137. LookingGlass updates and maintains an HTTP site called "Resources" that includes technical documentation encouraging the use of the '437 Accused Products in an infringing manner. This technical documentation includes whitepapers, events, case studies, data sheets, and videos that cover the operation of the '437 Accused Products in-depth,

including by advertising the '437 Accused Products' infringing security features and instructing consumers to configure and use the '437 Accused Products in an infringing manner. *See, e.g.*, Ex. 16, https://lookingglasscyber.com/resources/.

- U.S.C. § 271(c) because it has provided software and computer systems with software installed, that act as a material component of claims of the '437 Patent. In particular, LookingGlass knows that its products are particularly suited to be used in an infringing manner and are particularly suited for this use. Furthermore, the '437 Accused Products are highly developed and specialized security products, and are not staple articles or commodities of commerce because they must be installed and used in an infringing manner, as described in the direct infringement claim above.
- 139. LookingGlass knowingly and actively contributed to the direct infringement of the '437 Patent by instructing and encouraging its customers, purchasers, users, developers, vendors, and/or agents to meet the elements of the '437 Patent with the '437 Accused Products. Such use is consistent with how the products are described to directly infringe the '437 Patent, as described above and is incorporated by reference. Such knowing instructions and encouragement included, but is not limited to, advising third parties to use the '437 Accused Products in an infringing manner through direct communications with customers via training, support services, or sales calls, providing a mechanism through which third parties may infringe, and by advertising and promoting the use of the '437 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to setup the '437 Accused Products in an infringing manner. Furthermore, LookingGlass's customers also directly infringe these claims jointly with LookingGlass and its vendors, to the extent

specific components are provided by those entities. LookingGlass's customers direct and control the systems and methods in the claims and obtains benefits from the control of the system of the whole. LookingGlass's customers put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base. LookingGlass knew or was willfully blind to the fact that it was contributing to the infringement of others by practicing, either themselves or in conjunction with LookingGlass, one or more claims of the '437 Patent, including Claims 1, 4-8, 11-15, and 18-20.

- LookingGlass updates and maintains an HTTP site called "Resources" that 140. includes technical documentation encouraging the use of the '437 Accused Products in an infringing manner. This technical documentation includes whitepapers, events, case studies, data sheets, and videos that cover the operation of the '437 Accused Products in-depth, including by advertising the '437 Accused Products' infringing security features and instructing consumers to configure and use the '437 Accused Products in an infringing manner. See, e.g., Ex. 16, https://lookingglasscyber.com/resources/.
- 141. LookingGlass's indirect infringement has caused and is continuing to cause damage and irreparable injury to Centripetal, and Centripetal will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court.
- 142. LookingGlass has known or, in the alternative, has been willfully blind to Centripetal's technology and the '437 Patent. Centripetal is informed and believes that LookingGlass has undertaken no efforts to design these products or services around the '437 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the '437 Patent.

143. Centripetal is entitled to injunctive relief, damages and any other relief in accordance with 35 U.S.C. §§ 283, 284 and 285.

SEVENTH CAUSE OF ACTION (Direct Infringement of the '266 Patent pursuant to 35 U.S.C. § 271(a))

- Centripetal repeats, realleges, and incorporates by reference, as if fully set forth 144. herein, the allegations of the preceding paragraphs, as set forth above.
- 145. LookingGlass has infringed and continues to infringe a least Claims 1-5, 8-12, 15-18, and 21-25 of the '266 Patent.
- 146. LookingGlass's infringement is based upon literal infringement or infringement under the doctrine of equivalents, or both.
- LookingGlass's acts of making, using, importing, selling, and/or offering for 147. sale infringing products and services have been without the permission, consent, authorization, or license of Centripetal.
- 148. LookingGlass's infringement includes, but is not limited to, the manufacture, use, sale, importation and/or offer for sale of Centripetal's patented technology covered by the '266 Patent, these products, services, and technologies including, but not limited to those under the marketing names: scoutShield and CloudShield (the "'266 Accused Products"). LookingGlass also infringes these claims jointly with its customers, vendors, distributors, subsidiaries, and/or other agents of LookingGlass, to the extent specific components are provided by those customers or vendors. LookingGlass directs and controls the systems and methods in the claims and obtains benefits from the control of the system of the whole. In particular, LookingGlass put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base.

149. LookingGlass infringes the '266 Patent at least because it has one or more processors; and memory storing instructions that, when executed by the one or more

processors, cause the packet security gateway to: receive, from a security policy management

server external from the network protected by the packet security gateway, a dynamic security policy comprising a first set of packet filtering rules to be applied to all network traffic

traversing the boundary, wherein: each packet filtering rule of the first set of packet filtering

rules comprises at least one packet matching criterion and a corresponding packet

transformation function, and one or more first packet filtering rules of the first set of packet

filtering rules comprise packet matching criteria corresponding to one or more network

addresses and were automatically created or altered by the security policy management server

based on aggregated malicious traffic information, received from at least one third party

malicious host tracker service located in the one or more networks other than the network

protected by the packet security gateway, that comprises network addresses that have been

determined, by the at least one third party malicious host tracker service, to be associated with

malicious network traffic; perform, on a packet by packet basis, packet filtering on a first

portion of packets corresponding to network traffic traversing the boundary via the packet

security gateway based on the first set of packet filtering rules by performing at least one

packet transformation function specified by at least one packet filtering rule of the first set of

packet filtering rules on the first portion of packets; receive, after performing packet filtering

on the first portion of the packets, an updated second set of packet filtering rules for the

dynamic security policy from the security policy management server, wherein the updated

second set of packet filtering rules comprises an update to the one or more first packet filtering

rules created or altered by the security policy management server based on updated malicious

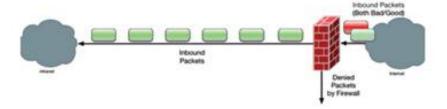
50

traffic information received from the at least one third party malicious host tracker service; and perform, on a packet by packet basis, packet filtering on a second portion of the packets corresponding to network traffic traversing the boundary via the packet security gateway based on the updated second set of packet filtering rules by performing at least one packet transformation function specified by at least one packet filtering rule of the second set of packet filtering rules on the second portion of packets.

150. The '266 Accused Products are packet security gateways. For example, scoutSHIELD is a packet security gateway that protects and collectively provides an entire interface across the boundary of a network and networks other than the protected network and performs packet filtering on both incoming and outgoing network traffic. scoutSHIELD includes Deep Packet Processing Module (DPPM), which inspects packets at line speed and performs filtering on a packet by packet basis to allow traffic or block the latest threats based on the updated threat feeds.

With a TIG, security professionals can now deploy enhanced threat response (including rules) without having to impact or change their existing traditional security tools such as firewalls, IDS and web content inspection.

A typical deployment (as shown below), allows organizations to deploy the TIG inline to the network data plane as complementary to the existing security infrastructure.



The TIG adds a level of protection as it is invisible in the network path, unlike traditional firewalls, making it harder for adversaries to discover and avoid deployed detection capabilities.

- Ex. 15, https://lookingglasscyber.com/blog/security-corner/real-time-threat-killer-automated-threat-intelligence-gateway-to-the-rescue/.
- 151. Additionally, scoutSHIELD operates on LookingGlass appliances, such as the CS-4000E or IRD-100, or operates on servers in the Cloud, both of which include processors and memory. scoutSHIELD receives dynamic security policies, such as Automated Data Services (ADS) machine-readable threat intelligence to automatically block known phishing URLs, malicious URLs, and malicious C2 Domains." These feeds are updated daily and provided real-time, and packet filtering occurs are subsequently based on the updated packet filtering rules.

LookingGlass* scoutSHIELD Threat Intelligence Gateway is a high-assurance, low-touch security appliance designed to augment firewalls.

The scoutSHIELD solution ingests LookingGlass' Automated Data Services" (ADS) machinereadable threat intelligence to automatically block known phishing URLs, malicious URLs, and malicious C2 Domains - disrupting these threats.

- Malicious C2 Domains Feed Daily updated blacklist of all known C2 botnet servers
- Phishing URL Feed Real-time feed of global phishing URLs
- Malicious URL Feed Real-time feed of global malicious URLs

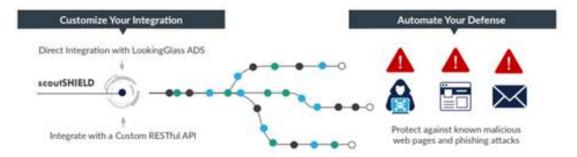
scoutSHIELD's automated response mechanism allows organizations to respond more efficiently and effectively to threats, so you can combat data breaches, ransomware, and stolen credentials in real-time. scoutSHIELD's multiple monitoring and reporting dashboards enable your security team to easily determine the effectiveness of policy enforcement, the health of the entire system, and if threat intelligence rulesets have been deployed successfully.

USE scoutSHIELD TO:

- Protect against known malicious web pages and phishing attacks with 99.99% accuracy
- Automatically prevent infected devices from communicating with C2 servers
- Increase analyst productivity by automatically mitigating threats in real-time
- Deliver insights using multiple dashboards for system health, performance, and mitigation rulesets
- Alert your organization of compromises on the network

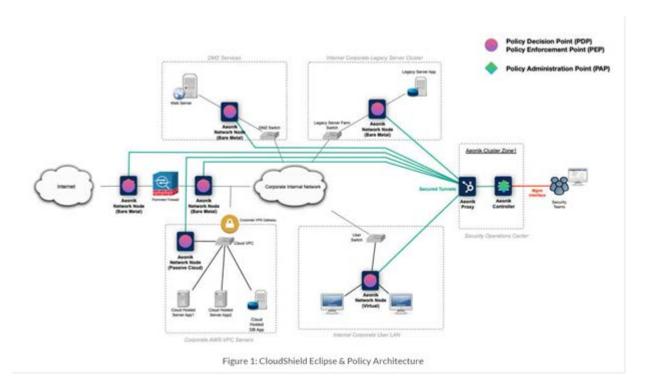
AUTOMATED DATA SERVICES

Open source collection across the surface, social, and Deep and Dark Web to deliver relevant, actionable indicators. ADS provides data feeds, monitoring, and finished intelligence in various formats and is fully integrated across our solutions portfolio.



Ex. 11, https://www.lookingglasscyber.com/wp-content/uploads/2017/09/scoutSHIELD_Data-Sheet_Online_May2019.pdf.

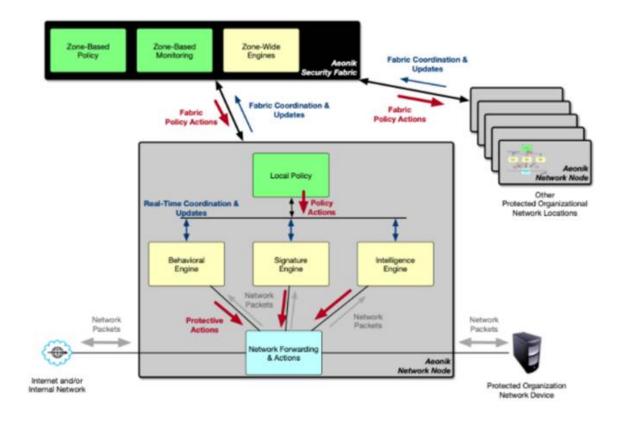
152. Furthermore, CloudShield (also known as Aeonik) is a packet security gateway that is deployed on the perimeter of the network, and throughout the internal network. CloudShield is a software-based solution that operates on hardware appliances on premise and/or in the Cloud to perform network traffic analysis, behavior and signature-based detection, threat intelligence, and advanced threat response at line rate to block malicious threats.



Ex. 18, https://web.archive.org/web/20210303083005/https://lookingglasscyber.com/blog/need-asmbghost-buster/; Ex. 19, https://www.lookingglasscyber.com/blog/making-cybersecuritypolicy-work-for-you-tunable-security-mitigation-at-attack-speed/.

Furthermore, CloudShield packet filtering rules are associated with threat feeds 153. from multiple sources, including third party feeds, and associated with malicious network traffic. CloudShield analyzes all inbound and outbound network traffic, and performs filtering based on the packet filtering rules from dynamic security policies, such as the threat intelligence feeds which are continuously updated.

Aeonik Power of 3 Detection & Response Engines



Ex. 20, https://www.linkedin.com/pulse/power-3-in-1-cybersecurity-allan-thomson/.

154. CloudShield includes Policy Detection and Enforcement, which performs packet filtering on multiple layers, as shown below. CloudShield performs "[v]isibility of incoming threats to the network" (IDS), "[m]itigation driven by detection engines [and] sensing" (IPS), "[m]itigation driven by known bad intelligence indicators" (Threat Intel Gateway), "[m]etadata and visibility across the network" (Network Traffic Analysis), and "Real-time mapping of everything on the network."

In addition to supporting a variety of areas, the organization can define policy that encompasses threat detection and mitigation leveraging one, some, or all of the security engines available within the CloudShield Eclipse.



Figure 6: Policy Controlling Security Detection & Mitigation

- Ex. 19, https://www.lookingglasscyber.com/blog/making-cybersecurity-policy-work-for-youtunable-security-mitigation-at-attack-speed/ (emphasis added).
- 155. Additionally, CloudShield's packet filtering rules are updated and subsequent packet filtering is performed based on the updated threat intelligence.
- 156. As a result of LookingGlass's unlawful activities, Centripetal has suffered and will continue to suffer irreparable harm for which there is no adequate remedy at law. Accordingly, Centripetal is entitled to preliminary and/or permanent injunctive relief.
- LookingGlass has willfully infringed the '266 Patent. Centripetal is informed 157. and believes that LookingGlass had knowledge of the '266 Patent through various channels,

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and despite its knowledge of Centripetal's patent rights, engaged in egregious behavior warranting enhanced damages.

- 158. LookingGlass thus knew or, in the alternative, was willfully blind to Centripetal's technology and the '266 Patent.
- 159. Despite this knowledge and/or willful blindness, LookingGlass has acted with blatant and egregious disregard for Centripetal's patent rights with an objectively high likelihood of infringement.
- 160. Centripetal is informed and believes that LookingGlass has undertaken no efforts to design these products or services around the '266 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the Asserted Patents. As such, LookingGlass has acted and continues to act recklessly, willfully, wantonly, deliberately, and egregiously engage in acts of infringement of the '266 Patent, justifying an award to Centripetal of increased damages under 35 U.S.C. § 284, and attorneys' fees and costs incurred under 35 U.S.C. § 285.
- LookingGlass's infringement of the '266 Patent has injured and continues to 161. injure Centripetal in an amount to be proven at trial, but not less than a reasonable royalty.
- 162. LookingGlass's infringement has caused and is continuing to cause damage and irreparable injury to Centripetal, and Centripetal will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court.
- Centripetal is entitled to injunctive relief, damages and any other relief in 163. accordance with 35 U.S.C. §§ 283, 284 and 285.

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EIGHTH CAUSE OF ACTION (Indirect Infringement of the '266 Patent)

- 164. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
- 165. LookingGlass has induced and continues to induce infringement of one or more claims of the '266 Patent under 35 U.S.C. § 271(b). LookingGlass has contributorily infringed and continues to contributorily infringe of one or more claims of the '266 Patent under 35 U.S.C. § 271(c).
- 166. LookingGlass knew or, in the alternative, was willfully blind to Centripetal's technology and the '266 Patent. Centripetal is informed and believes that LookingGlass has undertaken no efforts to design these products or services around the '266 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the '266 Patent. LookingGlass has also designed its products in a manner where it specifically intends them to infringe. Alternatively, LookingGlass knows of the infringement of the '266 Patent as a result of this complaint.
- 167. LookingGlass induces the infringement of the '266 Patent pursuant to 35 U.S.C. § 271(b) by instructing, directing and/or requiring others, including its customers, purchasers, users, developers, vendors, and/or agents to perform one or more of the steps of the method claims, or provide one or more component of a system or computer-readable medium claims, either literally or under the doctrine of equivalents. All the elements of the claims are used either LookingGlass, its customers, purchasers, users, developers, vendors, and/or agents, or some combination thereof. LookingGlass knew or was willfully blind to the fact that it was inducing others to infringe by practicing, either themselves or in conjunction with

LookingGlass, one or more claims of the '266 Patent, including Claims 1-5, 8-12, 15-18, and 21-25.

- LookingGlass knowingly and actively aided and abetted the direct infringement 168. of the '266 Patent by instructing and encouraging its customers, purchasers, users, developers, vendors, and/or agents to meet the elements of the '266 Patent with the '266 Accused Products. Such use is consistent with how the products are described to directly infringe the '266 Patent, as described above and is incorporated by reference. Such knowing instructions and encouragement included, but is not limited to, advising third parties to use the '266 Accused Products in an infringing manner through direct communications with customers via training, support services, or sales calls, providing a mechanism through which third parties may infringe, and by advertising and promoting the use of the '266 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to setup the '266 Accused Products in an infringing manner. Furthermore, LookingGlass's customers also directly infringe these claims jointly with LookingGlass and its vendors, to the extent specific components are provided by those entities. LookingGlass's customers direct and control the systems and methods in the claims and obtains benefits from the control of the system of the whole. LookingGlass's customers put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base.
- 169. LookingGlass updates and maintains an HTTP site called "Resources" that includes technical documentation encouraging the use of the '266 Accused Products in an infringing manner. This technical documentation includes whitepapers, events, case studies, data sheets, and videos that cover the operation of the '266 Accused Products in-depth,

including by advertising the '266 Accused Products' infringing security features and instructing consumers to configure and use the '266 Accused Products in an infringing manner. See, e.g., Ex. 16, https://lookingglasscyber.com/resources/.

- 170. LookingGlass contributes to the infringement of the '266 Patent pursuant to 35 U.S.C. § 271(c) because it has provided software and computer systems with software installed, that act as a material component of claims of the '266 Patent. In particular, LookingGlass knows that its products are particularly suited to be used in an infringing manner and are particularly suited for this use. Furthermore, the '266 Accused Products are highly developed and specialized security products, and are not staple articles or commodities of commerce because they must be installed and used in an infringing manner, as described in the direct infringement claim above.
- LookingGlass knowingly and actively contributed to the direct infringement of the '266 Patent by instructing and encouraging its customers, purchasers, users, developers, vendors, and/or agents to meet the elements of the '266 Patent with the '266 Accused Products. Such use is consistent with how the products are described to directly infringe the '266 Patent, as described above and is incorporated by reference. Such knowing instructions and encouragement included, but is not limited to, advising third parties to use the '266 Accused Products in an infringing manner through direct communications with customers via training, support services, or sales calls, providing a mechanism through which third parties may infringe, and by advertising and promoting the use of the '266 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to setup the '266 Accused Products in an infringing manner. Furthermore, LookingGlass's customers also directly infringe these claims jointly with LookingGlass and its vendors, to the extent

specific components are provided by those entities. LookingGlass's customers direct and control the systems and methods in the claims and obtains benefits from the control of the system of the whole. LookingGlass's customers put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base. LookingGlass knew or was willfully blind to the fact that it was contributing to the infringement of others by practicing, either themselves or in conjunction with LookingGlass, one or more claims of the '266 Patent, including Claims 1-5, 8-12, 15-18, and 21-25.

- 172. LookingGlass updates and maintains an HTTP site called "Resources" that includes technical documentation encouraging the use of the '266 Accused Products in an infringing manner. This technical documentation includes whitepapers, events, case studies, data sheets, and videos that cover the operation of the '266 Accused Products in-depth, including by advertising the '266 Accused Products' infringing security features and instructing consumers to configure and use the '266 Accused Products in an infringing manner. See, e.g., Ex. 16, https://lookingglasscyber.com/resources/.
- 173. LookingGlass's indirect infringement has caused and is continuing to cause damage and irreparable injury to Centripetal, and Centripetal will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court.
- LookingGlass's indirect infringement has caused and is continuing to cause 174. damage and irreparable injury to Centripetal, and Centripetal will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court.
- 175. LookingGlass has known or, in the alternative, has been willfully blind to Centripetal's technology and the '266 Patent. Centripetal is informed and believes that

LookingGlass has undertaken no efforts to design these products or services around the '266 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the '266 Patent.

176. Centripetal is entitled to injunctive relief, damages and any other relief in accordance with 35 U.S.C. §§ 283, 284 and 285.

NINTH CAUSE OF ACTION (Direct Infringement of the '380 Patent pursuant to 35 U.S.C. § 271(a))

- 177. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
- 178. LookingGlass has infringed and continues to infringe a least Claims 1-5, 11-17, and 20-30 of the '380 Patent.
- 179. LookingGlass's infringement is based upon literal infringement or infringement under the doctrine of equivalents, or both.
- 180. LookingGlass's acts of making, using, importing, selling, and/or offering for sale infringing products and services have been without the permission, consent, authorization, or license of Centripetal.
- 181. LookingGlass's infringement includes, but is not limited to, the manufacture, use, sale, importation and/or offer for sale of Centripetal's patented technology covered by the '380 Patent, these products, services, and technologies including, but not limited to those under the marketing names: DNS Defender and/or scoutPRIME (the "'380 Accused Products"). LookingGlass also infringes these claims jointly with its customers, vendors, distributors, subsidiaries, and/or other agents of LookingGlass, to the extent specific components are provided by those customers or vendors. LookingGlass directs and controls the systems and methods in the claims and obtains benefits from the control of the system of the whole. In

particular, LookingGlass put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base.

- 182. LookingGlass infringes the '380 Patent at least because it has one or more processors; and memory comprising instructions that, when executed by the one or more processors, cause the packet security gateway to: receive a plurality of outbound in-transit packets departing the protected network, wherein the plurality of outbound in-transit packets comprises first packets destined for a first destination; determine, based on one or more packetfiltering rules, that the first destination comprises a destination outside of the protected network; identify, based on a determination that the first destination comprises a destination outside of the protected network, at least one application packet contained in the first packets; determine that the identified at least one application packet is associated with a data transfer protocol associated with the one or more packet-filtering rules; identify a data transfer request field within a header region of the identified at least one application packet; determine whether a value of the identified data transfer request field indicates that the data transfer protocol comprises one or more network exfiltration methods associated with the one or more packetfiltering rules; and apply one or more operators, specified by the one or more packet-filtering rules and based on a determination that the identified data transfer request field indicates one or more network exfiltration methods, to the first packets, wherein applying the one or more operators causes the first packets to be dropped.
- 183. The '380 Accused Products are packet filtering devices. For example, DNS

 Defender is a DNS firewall that receives machine readable threat intelligence (MRTI) like that
 delivered from LookingGlass scoutPRIME or Phishing & Malicious URL data feeds, which

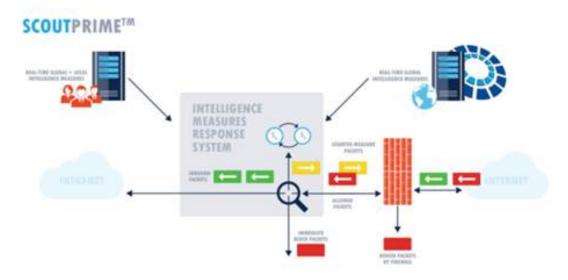
keeps DNS Defender up to date with the latest threats, such as malicious domains and IP addresses of the advanced persistent threats (APTs) and botnet C2 servers. Both platforms are available as appliances or operate on servers in the Cloud, both of which include processors and memory.

The LookingGlass Threat Mitigation Plotforms are high-security, high-performance appliances providing enterprise threat mitigation capabilities through LookingGlass NetDefender", LookingGlass NetSentry", and LookingGlass DNS Defender". Key components of the platforms are: 1) Deep Packet Processing Module (DPPM) for Packet Inspection & Regular Expression processing, 2) Content Processing Accelerator (CPA) for In-Depth Analysis, and 3) Integrated Ethernet Switching (ISM).

PLATFORM COMPONENTS								
	CS-4000	C5-4000E						
Processing Modules	Required, 3 state for either DFFM or CFA.							
Communications Management Medule (CMM)	One required, 2nd one optional (litternet interfo	coe) One required, not optional, treenal						
Local Management Medule (LMM)	None, however remote management server requi	ired One (1) required, internal						
Integrated Switch Module (ISM)	I required, with the second slot being a 2nd EMI or cross over module (It extends limerhoos 1/10 Gbps with small form-factor pluggable SFF+)							
Switch Cross Over Module	I required, with the second slot being a 2nd ISM or cross over module (8 external interfaces 1/30 Gbps with SFF+)							
Deep Focket Processing Module (DPPM)	Zero to Three per chossis (4-10 Glops internal interfaces/DPFM)							
DPPM-4DE	n/a	Up-to 20 Gbps NPU executing multiple, simultaneous pockerC applications 20 Gbps RECEX engine IAST. Pre-processor delivering up to 80 Gbps per blade (60M packets/sed) of layer 2-4 dissuffication, switching, replication, and exclutionist 50b. Relational dissubsise (4096Mb) diseatly in distoplane for stateful tracking.						
DPPM-1500	Up to 10 Gbgs Network Processing Unit (NPU) executing multiple, simultaneous pocketC applications. S Gbgs regular expression (REGEX) processing engine Rine Acceleration System (RAST): Pre-processor delivering up-to-40 Gbgs per blade (60M packets/sec) of larger 2-4 classification, veliciting, replication, and modification. Silicon Distribute (SDB): Relational database (256 Mb) directly in datapliane for stateful tracking and global dista state.							
Content Processing Accelerator (CPA)	Zero to Three per chosis (4-10 Glogs internal interfoces/CPA)							
CPA-40E	n/a	Dupl letel® Xeon® 3.4GHz, Ten (10) Cores per CPU, up to 128GB DDR4						
CPA-1000/1500	Duol lintel [®] Xeon [®] 2.4GHz, Six (b) Cores per CPU, 48G8 DDR3							
Power Supplies	five required (either AC or DC), third aprional (100+-240+)							
Fan Tray	One for country (bulk-in redundancy)							
SP+	Zero to slateer, optional, surtoner can provide at can be undered							

Ex. 21, https://www.lookingglasscyber.com/wp-content/uploads/2017/08/CS-Platform-Tech-Spec_online.pdf.

184. Additionally, the DNS Defender with scoutPRIME is placed at the network boundary and analyzes incoming and outgoing network packets and monitors for application layer attacks, including data transfer protocols used for exfiltration attempts from threats such as command and control (C2) servers and botnet. DNS Defender with scoutPRIME analyzes network traffic at the protocol level, and blocks or drops packets based on the packet filtering rules that indicate an exfiltration attempt.



Ex. 22, https://lookingglasscyber.com/blog/security-corner/moving-beyond-threat-hunting-actively-counter-threats/.

- 185. As a result of LookingGlass's unlawful activities, Centripetal has suffered and will continue to suffer irreparable harm for which there is no adequate remedy at law.

 Accordingly, Centripetal is entitled to preliminary and/or permanent injunctive relief.
- 186. LookingGlass has willfully infringed the '380 Patent. Centripetal is informed and believes that LookingGlass had knowledge of the '380 Patent through various channels, and despite its knowledge of Centripetal's patent rights, engaged in egregious behavior warranting enhanced damages.
- 187. LookingGlass thus knew or, in the alternative, was willfully blind to Centripetal's technology and the '380 Patent.

- 188. Despite this knowledge and/or willful blindness, LookingGlass has acted with blatant and egregious disregard for Centripetal's patent rights with an objectively high likelihood of infringement.
- Centripetal is informed and believes that LookingGlass has undertaken no 189. efforts to design these products or services around the '380 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the Asserted Patents. As such, LookingGlass has acted and continues to act recklessly, willfully, wantonly, deliberately, and egregiously engage in acts of infringement of the '380 Patent, justifying an award to Centripetal of increased damages under 35 U.S.C. § 284, and attorneys' fees and costs incurred under 35 U.S.C. § 285.
- 190. LookingGlass's infringement of the '380 Patent has injured and continues to injure Centripetal in an amount to be proven at trial, but not less than a reasonable royalty.
- LookingGlass's infringement has caused and is continuing to cause damage and 191. irreparable injury to Centripetal, and Centripetal will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court.
- 192. Centripetal is entitled to injunctive relief, damages and any other relief in accordance with 35 U.S.C. §§ 283, 284 and 285.

TENTH CAUSE OF ACTION (Indirect Infringement of the '380 Patent)

- 193. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
- LookingGlass has induced and continues to induce infringement of one or more 194. claims of the '380 Patent under 35 U.S.C. § 271(b). LookingGlass has contributorily infringed

and continues to contributorily infringe of one or more claims of the '380 Patent under 35 U.S.C. § 271(c).

- 195. LookingGlass knew or, in the alternative, was willfully blind to Centripetal's technology and the '380 Patent. Centripetal is informed and believes that LookingGlass has undertaken no efforts to design these products or services around the '380 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the '380 Patent. LookingGlass has also designed its products in a manner where it specifically intends them to infringe. Alternatively, LookingGlass knows of the infringement of the '380 Patent as a result of this complaint.
- LookingGlass induces the infringement of the '380 Patent pursuant to 35 U.S.C. 196. § 271(b) by instructing, directing and/or requiring others, including its customers, purchasers, users, developers, vendors, and/or agents to perform one or more of the steps of the method claims, or provide one or more component of a system or computer-readable medium claims, either literally or under the doctrine of equivalents. All the elements of the claims are used either LookingGlass, its customers, purchasers, users, developers, vendors, and/or agents, or some combination thereof. LookingGlass knew or was willfully blind to the fact that it was inducing others to infringe by practicing, either themselves or in conjunction with LookingGlass, one or more claims of the '380 Patent, including Claims 1-5, 11-17, and 20-30.
- 197. LookingGlass knowingly and actively aided and abetted the direct infringement of the '380 Patent by instructing and encouraging its customers, purchasers, users, developers, vendors, and/or agents to meet the elements of the '380 Patent with the '380 Accused Products. Such use is consistent with how the products are described to directly infringe the '380 Patent, as described above and is incorporated by reference. Such knowing instructions and

encouragement included, but is not limited to, advising third parties to use the '380 Accused Products in an infringing manner through direct communications with customers via training, support services, or sales calls, providing a mechanism through which third parties may infringe, and by advertising and promoting the use of the '380 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to setup the '380 Accused Products in an infringing manner. Furthermore, LookingGlass's customers also directly infringe these claims jointly with LookingGlass and its vendors, to the extent specific components are provided by those entities. LookingGlass's customers direct and control the systems and methods in the claims and obtains benefits from the control of the system of the whole. LookingGlass's customers put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base.

198. LookingGlass updates and maintains an HTTP site called "Resources" that includes technical documentation encouraging the use of the '380 Accused Products in an infringing manner. This technical documentation includes whitepapers, events, case studies, data sheets, and videos that cover the operation of the '380 Accused Products in-depth, including by advertising the '380 Accused Products' infringing security features and instructing consumers to configure and use the '380 Accused Products in an infringing manner. *See, e.g.*, Ex. 16, https://lookingglasscyber.com/resources/.

199. LookingGlass contributes to the infringement of the '380 Patent pursuant to 35 U.S.C. § 271(c) because it has provided software and computer systems with software installed, that act as a material component of claims of the '380 Patent. In particular, LookingGlass knows that its products are particularly suited to be used in an infringing manner

and are particularly suited for this use. Furthermore, the '380 Accused Products are highly developed and specialized security products, and are not staple articles or commodities of commerce because they must be installed and used in an infringing manner, as described in the direct infringement claim above.

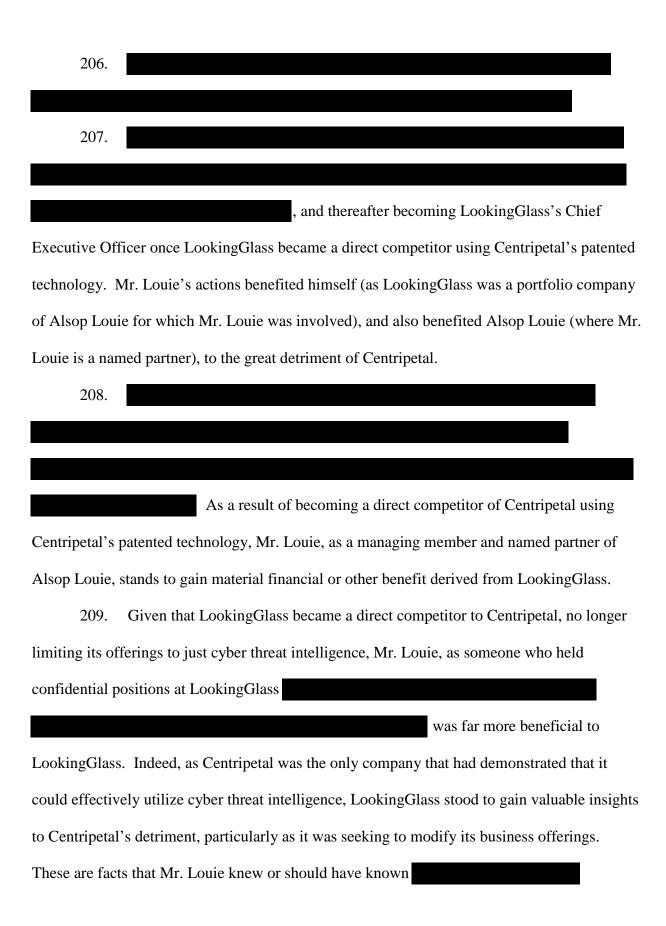
LookingGlass knowingly and actively contributed to the direct infringement of 200. the '380 Patent by instructing and encouraging its customers, purchasers, users, developers, vendors, and/or agents to meet the elements of the '380 Patent with the '380 Accused Products. Such use is consistent with how the products are described to directly infringe the '380 Patent, as described above and is incorporated by reference. Such knowing instructions and encouragement included, but is not limited to, advising third parties to use the '380 Accused Products in an infringing manner through direct communications with customers via training, support services, or sales calls, providing a mechanism through which third parties may infringe, and by advertising and promoting the use of the '380 Accused Products in an infringing manner, and distributing guidelines and instructions to third parties on how to setup the '380 Accused Products in an infringing manner. Furthermore, LookingGlass's customers also directly infringe these claims jointly with LookingGlass and its vendors, to the extent specific components are provided by those entities. LookingGlass's customers direct and control the systems and methods in the claims and obtains benefits from the control of the system of the whole. LookingGlass's customers put the systems and methods described in the claims into service to benefit its ability to provide security and protection, identify threats, and react across its customer base. LookingGlass knew or was willfully blind to the fact that it was contributing to the infringement of others by practicing, either themselves or in conjunction

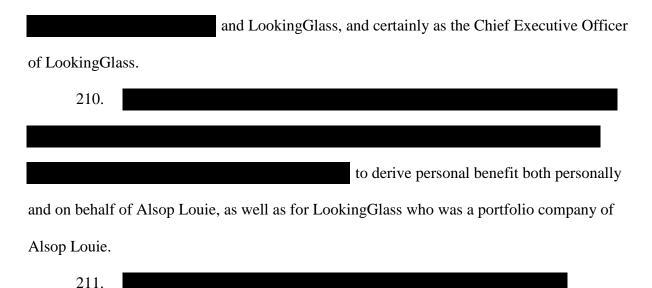
with LookingGlass, one or more claims of the '380 Patent, including Claims 1-5, 11-17, and 20-30.

- LookingGlass updates and maintains an HTTP site called "Resources" that 201. includes technical documentation encouraging the use of the '380 Accused Products in an infringing manner. This technical documentation includes whitepapers, events, case studies, data sheets, and videos that cover the operation of the '380 Accused Products in-depth, including by advertising the '380 Accused Products' infringing security features and instructing consumers to configure and use the '380 Accused Products in an infringing manner. See, e.g., Ex. 16, https://lookingglasscyber.com/resources/.
- 202. LookingGlass's indirect infringement has caused and is continuing to cause damage and irreparable injury to Centripetal, and Centripetal will continue to suffer damage and irreparable injury unless and until that infringement is enjoined by this Court.
- 203. LookingGlass has known or, in the alternative, has been willfully blind to Centripetal's technology and the '380 Patent. Centripetal is informed and believes that LookingGlass has undertaken no efforts to design these products or services around the '380 Patent to avoid infringement despite LookingGlass's knowledge and understanding that its products and services infringe the '380 Patent.
- Centripetal is entitled to injunctive relief, damages and any other relief in 204. accordance with 35 U.S.C. §§ 283, 284 and 285.

ELEVENTH CAUSE OF ACTION (Mr. Louie's Breaches of Fiduciary Duties)

205. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.





- 212. Centripetal did not discover Mr. Louie's breach of fiduciary duties until
- Centripetal learned that he became LookingGlass's Chief Executive Officer in October of 2020, which was shortly after LookingGlass's release of its first product making the unauthorized use of Centripetal's patented technology.
- 213. Mr. Louie willfully and knowingly breached his fiduciary duties and his conduct was fraudulent, malicious, willful, and in bad faith.
- 214. Centripetal has incurred and continues to incur damages and irreparable injury as a direct and proximate result of Mr. Louie's breach of his fiduciary duties.
- 215. Mr. Louie willfully and knowingly breached his fiduciary duties and his conduct was fraudulent, malicious, willful, and in bad faith.
- 216. Centripetal has incurred and continues to incur damages and irreparable injury as a direct and proximate result of defendant's breach of his fiduciary duties.

TWELFTH CAUSE OF ACTION (Mr. Louie's Breach of Confidentiality Obligations)

217. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.



- 219. Centripetal is informed and believes that Mr. Louie breached his confidentiality obligations in, *inter alia*, advising, guiding and directing LookingGlass' business, which has resulted in LookingGlass changing its business model and becoming a direct competitor of Centripetal, as well as an infringer of Centripetal's Patents.
- 220. Mr. Louie's actions, which are alleged above and throughout this Complaint, have injured and damaged Centripetal and is a result of his violation of his confidentiality obligations.
- 221. Centripetal has incurred and continues to incur damages and irreparable injury as a direct and proximate result of Mr. Louie's actions.

THIRTEENTH CAUSE OF ACTION

(Alsop Louie Capital and Alsop Louie Partners's Breach of Confidentiality Obligations)

222. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.

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- 224. Centripetal is informed and believes that Alsop Louie Capital and Alsop Louie Partners (as Alsop Louie Capital's general partner) breached their confidentiality obligations in, inter alia, advising, guiding and directing LookingGlass' business, which has resulted in LookingGlass changing its business model and becoming a direct competitor of Centripetal, as well as an infringer of Centripetal's Patents.
- 225. Alsop Louie Capital's and Alsop Louie Partners's actions, which are alleged above and throughout this Complaint, have injured and damaged Centripetal as a result of their violation of their confidentiality obligations.
- 226. Centripetal has incurred and continues to incur damages and irreparable injury as a direct and proximate result of Alsop Louie Capital's and Alsop Louie Partners's actions.

FOURTEENTH CAUSE OF ACTION

(Alsop Louie's Aiding and Abetting of Gilman Louie's Breach of Fiduciary Duties)

- 227. Centripetal repeats, realleges, and incorporates by reference, as if fully set forth herein, the allegations of the preceding paragraphs, as set forth above.
- 228. As described above, Mr. Louie had fiduciary duties to Centripetal, which he breached.
- 229. Alsop Louie aided and abetted his breach of fiduciary duties, using its influence as to pressure Centripetal into engaging with LookingGlass.
- 230. Alsop Louie knew the amount of care which an ordinarily careful and prudent person would use in similar circumstances and that Mr. Louie had to act in good faith for the benefit of the Centripetal, not for his or Alsop Louie's personal interest.
- 231. Alsop Louie encouraged Mr. Louie to participate in actions that would harm Centripetal, as described above.

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- 232. Alsop Louie stood to gain material financial or other benefit derived from the aiding and abetting Mr. Louie's breach of fiduciary duties.
- 233. Centripetal has incurred and continues to incur damages and irreparable injury as a direct and proximate result of defendant's breach of their fiduciary duties.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Centripetal prays for relief and judgment as follows:

- (A) An entry of judgment holding that LookingGlass has infringed and is infringing the '028 Patent, '126 Patent, '437 Patent, '266 Patent, and the '380 Patent;
- (B) A preliminary and permanent injunction against LookingGlass and its officers, employees, agents, servants, attorneys, instrumentalities, and/or those in privity with them, from infringing the '028 Patent, '126 Patent, '437 Patent, '266 Patent, and the '380 Patent;
- (C) An award to Centripetal of such damages as it shall prove at trial against LookingGlass that is adequate to fully compensate Centripetal for LookingGlass's infringement of the '028 Patent, '126 Patent, '437 Patent, '266 Patent, and the '380 Patent;
- (D) A determination that LookingGlass's infringement has been willful, wanton, deliberate, and egregious;
- (E) A determination that the damages against LookingGlass be trebled or for any other basis within the Court's discretion pursuant to 35 U.S.C. § 284;
- (F) A finding that this case is "exceptional" and an award to Centripetal of its costs and reasonable attorneys' fees, as provided by 35 U.S.C. § 285;
- (G) An accounting of all infringing sales and revenues, together with post judgment interest and prejudgment interest from the first date of infringement of the '028 Patent, '126 Patent, '437 Patent, '266 Patent, and the '380 Patent;

- (H) A determination that Mr. Louie breached his fiduciary obligations to Centripetal and did so willfully;
- (I) A determination that Mr. Louie breached his confidentiality obligations to Centripetal;
- (J) An award to Centripetal of such damages caused by Mr. Louie's breach of fiduciary duties and confidentiality obligations;
- (K) An award to Centripetal of its attorney fees and costs relating to Mr. Louie's breach of fiduciary duties and confidentiality obligations;
- (L) A determination that Alsop Louie are jointly and severally liable for aiding and abetting in Mr. Louie's breach of fiduciary duties to Centripetal;
- (M) A determination that Alsop Louie Capital and Alsop Louie Partners breached their confidentiality obligations to Centripetal;
- (N) An award to Centripetal of such damages caused by Alsop Louie Capital's and Alsop Louie Partners' breach of confidentiality obligations and damages caused by Alsop Louie's aiding and abetting of Mr. Louie's breach of fiduciary duties;
- (O) An award to Centripetal of its attorney fees and costs relating to Alsop Louie Capital's and Alsop Louie Partners's breach of confidentiality obligations and Alsop Louie's aiding and abetting of Mr. Louie's breach of fiduciary duties; and
 - (P) Such further and other relief as the Court may deem proper and just.

Dated: September 14, 2021 Respectfully submitted,

/s/ Stephen E. Noona

Stephen E. Noona

Virginia State Bar No. 25367

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Attorneys for Plaintiff

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DEMAND FOR JURY TRIAL

In accordance with Rule 38 of the Federal Rules of Civil Procedure, Plaintiff

respectfully demands a jury trial of all issues triable to a jury in this action.

Dated: September 14, 2021 Respectfully submitted,

/s/ Stephen E. Noona

Stephen E. Noona

Virginia State Bar No. 25367

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